Money and Banking

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Lecture 11 The Foreign Exchange Market

- Foreign Exchange Market
- Exchange Rates in the Long Run
- Exchange Rates in the Short Run
- Explaining Changes in Exchange Rates

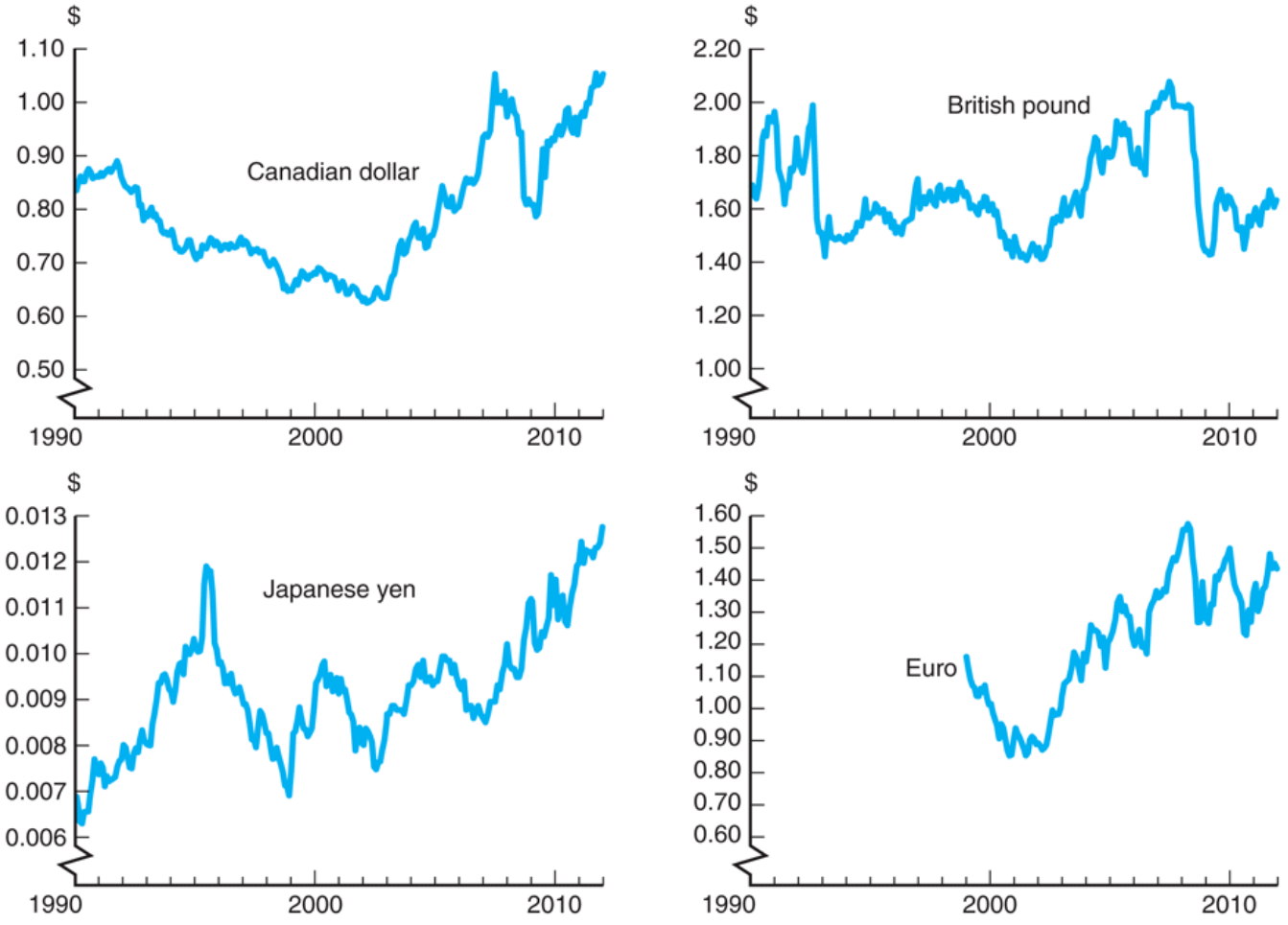
Foreign Exchange Market

- Exchange rate: price of one currency in terms of another
  - Pay attention to the **quotation**: which is the fixed currency and which is the variable currency (Normally: EUR-GBP-USD-Others)
- Foreign exchange market: the financial market where exchange rates are determined
- **Spot transaction**: immediate (two-day) exchange of bank deposits
  - Spot exchange rate
- **Forward transaction**: the exchange of bank deposits at some specified future date
  - Forward exchange rate

Foreign Exchange Market

- **Appreciation**: a currency rises in value relative to another currency
- **Depreciation**: a currency falls in value relative to another currency
- When a country's currency appreciates, the country's goods abroad become more expensive and foreign goods in that country become less expensive and vice versa
  - But exchange rate pass-through is usually imperfect
- Foreign Exchange Market is usually **over-the-counter market**
  - Mostly there are large banks serve as dealers that are standing by to purchase or sell currency.

Foreign Exchange Rates



Exchange Rates in the Long Run

- **Law of one price (LOP)**

  - If two countries produce an identical good, and transportation costs and trade barriers are very low, the price of the good should be the same throughout the world no matter which country produces it.

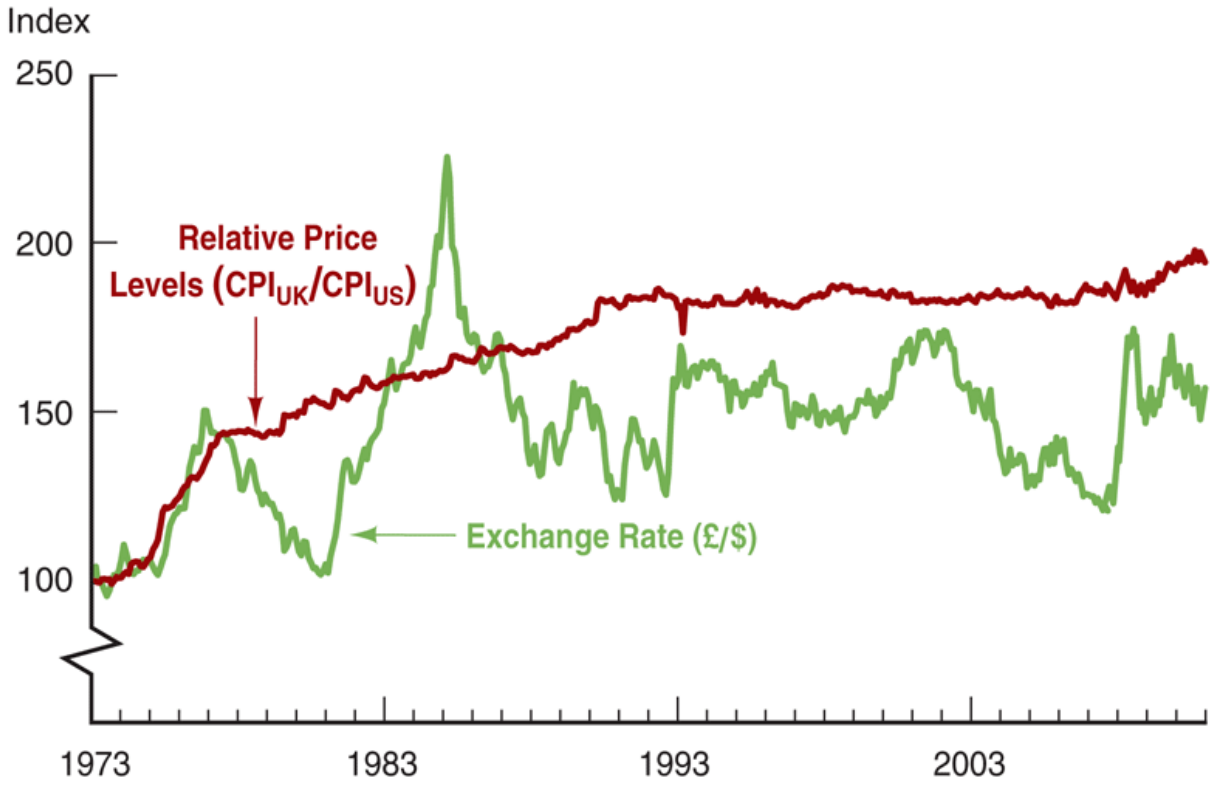
- **Theory of Purchasing Power Parity**

  - exchange rates between any two currencies will adjust to reflect changes in the price levels of the two countries (an application of LOP)

  - **real exchange rate**, the rate at which domestic goods can be exchanged for foreign goods. (the price of domestic goods relative to the price of foreign goods denominated in the domestic currency)

  - the theory of PPP suggests that if one country's price level rises relative to another's, its currency should depreciate (the other country's currency should appreciate)

Purchasing Power Parity



Why the PPP does not hold in the short run?

Because: 1) the goods are not identical 2) many goods (especially services) are not tradable 3) trade cost is non-ignorable

Exchange Rates in the Long Run

Factors That Affect Exchange Rates in the Long Run

Factor	Change in Factor	Response of the Exchange Rate, *E**
Domestic price level†	↑	↓
Trade barriers†	↑	↑
Import demand	↑	↓
Export demand	↑	↑
Productivity†	↑	↑

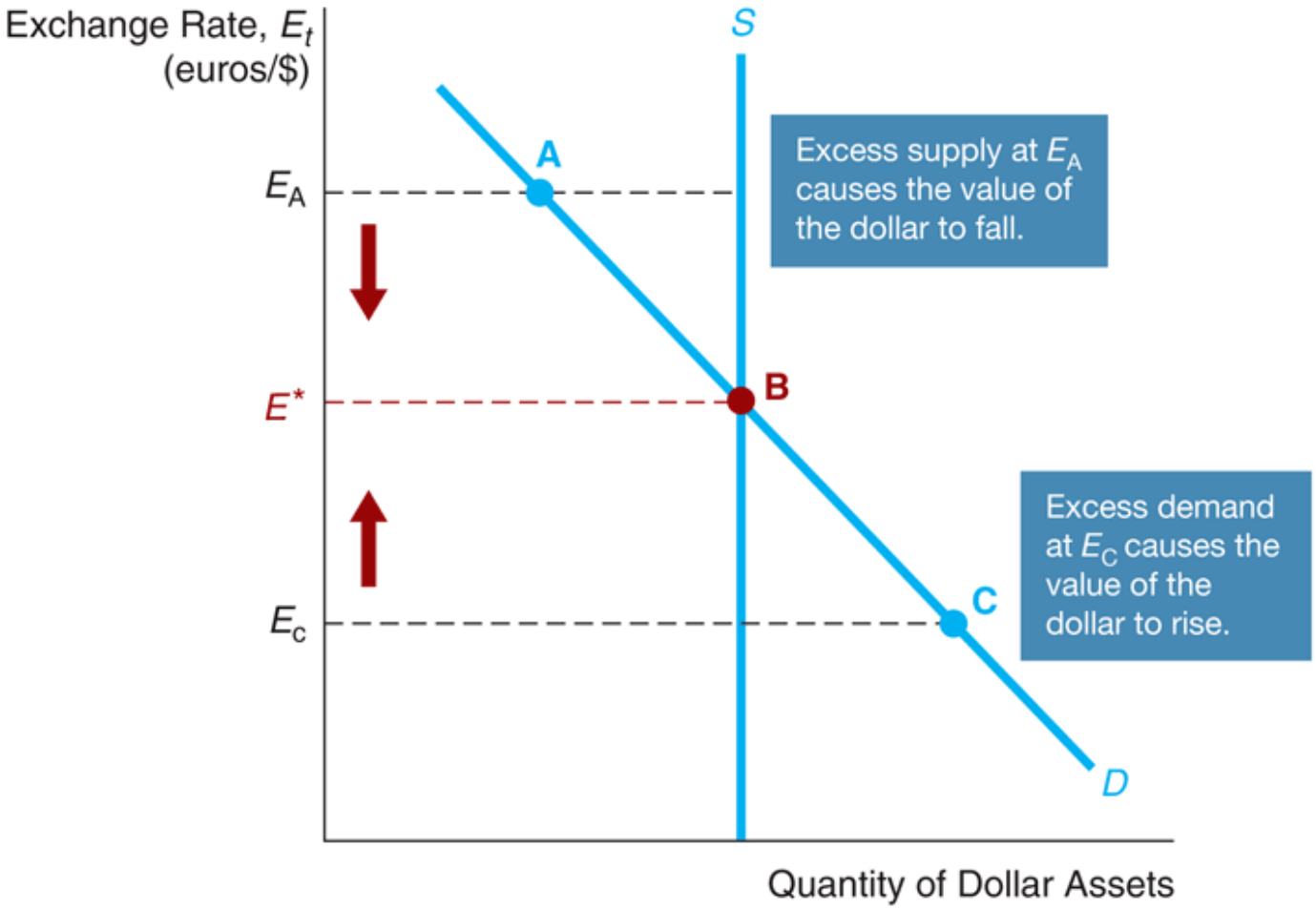
*Units of foreign currency per dollar: ↑ indicates domestic currency appreciation; ↓, depreciation.
†Relative to other countries.
Note: Only increases (↑) in the factors are shown; the effects of decreases in the variables on the exchange rate are the opposite of those indicated in the "Response" column.

if a factor increases the demand for domestic goods relative to foreign goods, the domestic currency will appreciate; if a factor decreases the relative demand for domestic goods, the domestic currency will depreciate.

Exchange Rates in the Short Run

- An exchange rate is the price of domestic assets in terms of foreign assets
- Supply curve for domestic assets
  - Assume amount of domestic assets is fixed (supply curve is vertical)
- Demand curve for domestic assets
  - Most important determinant is the relative expected return of domestic assets
  - At lower current values of the dollar (everything else equal), the quantity demanded of dollar assets is higher

Exchange Rates in the Short Run

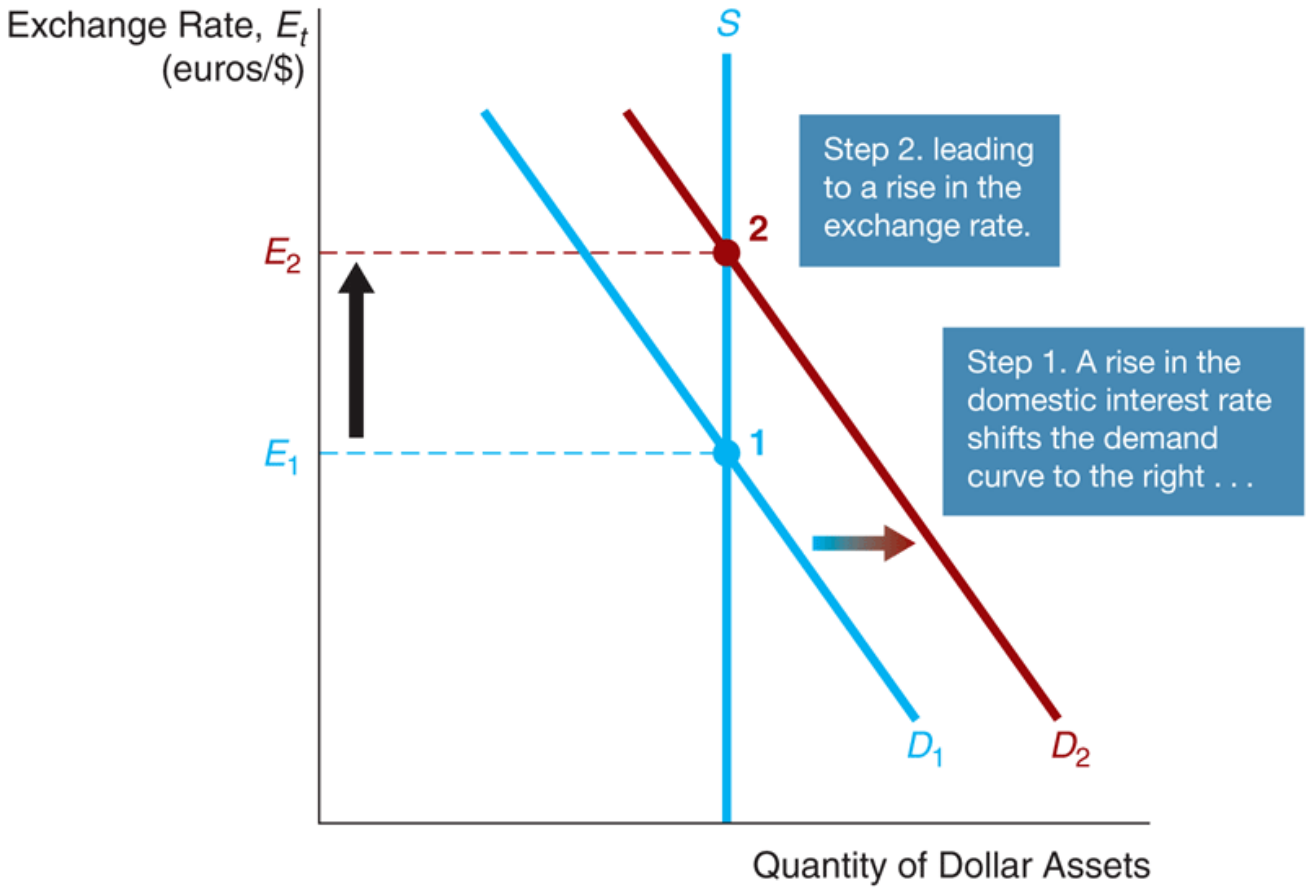


Exchange Rates in the Short Run

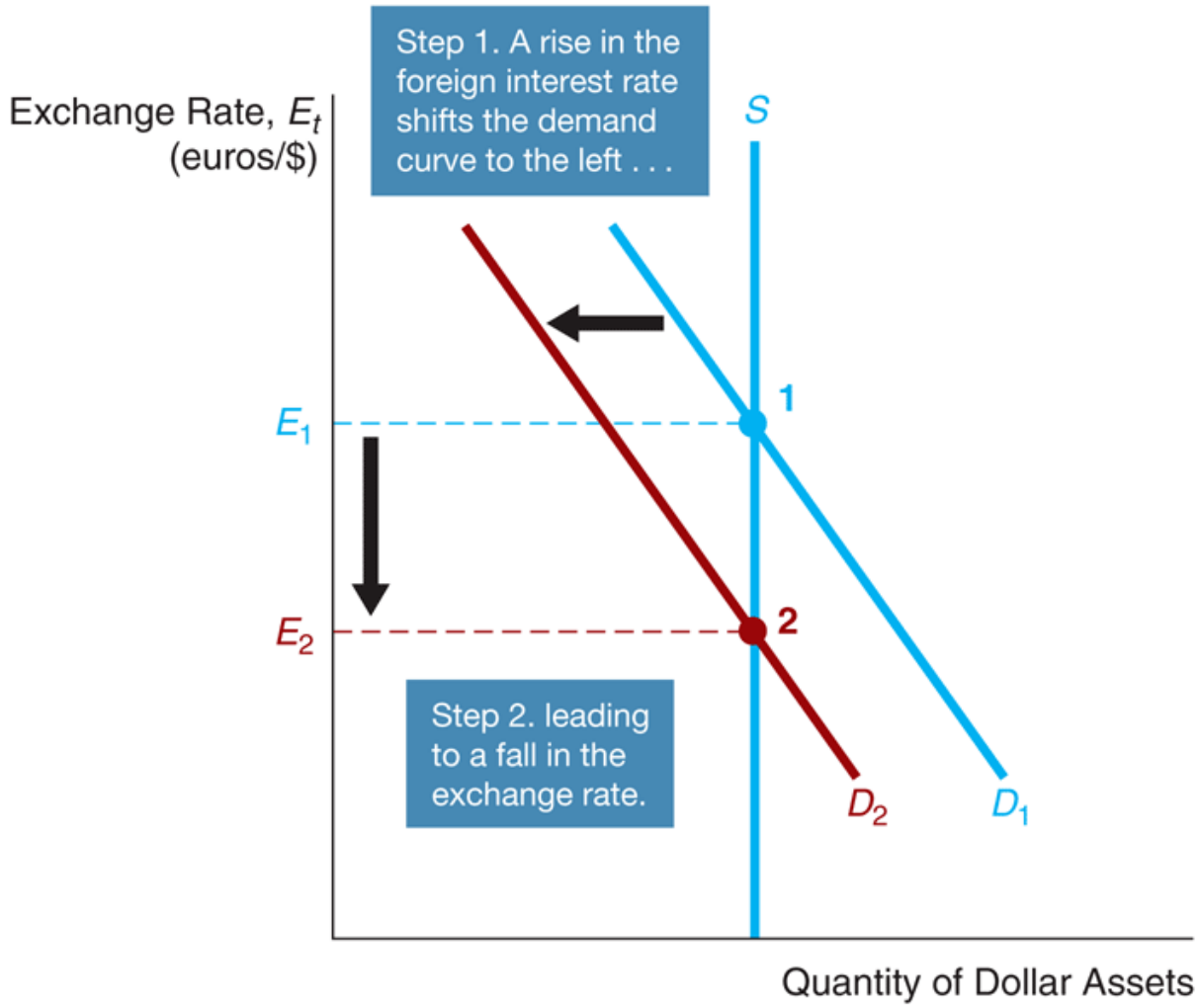
Shifts in the demand for domestic assets

- Domestic interest rate
- Foreign interest rate
- Expected future exchange rate

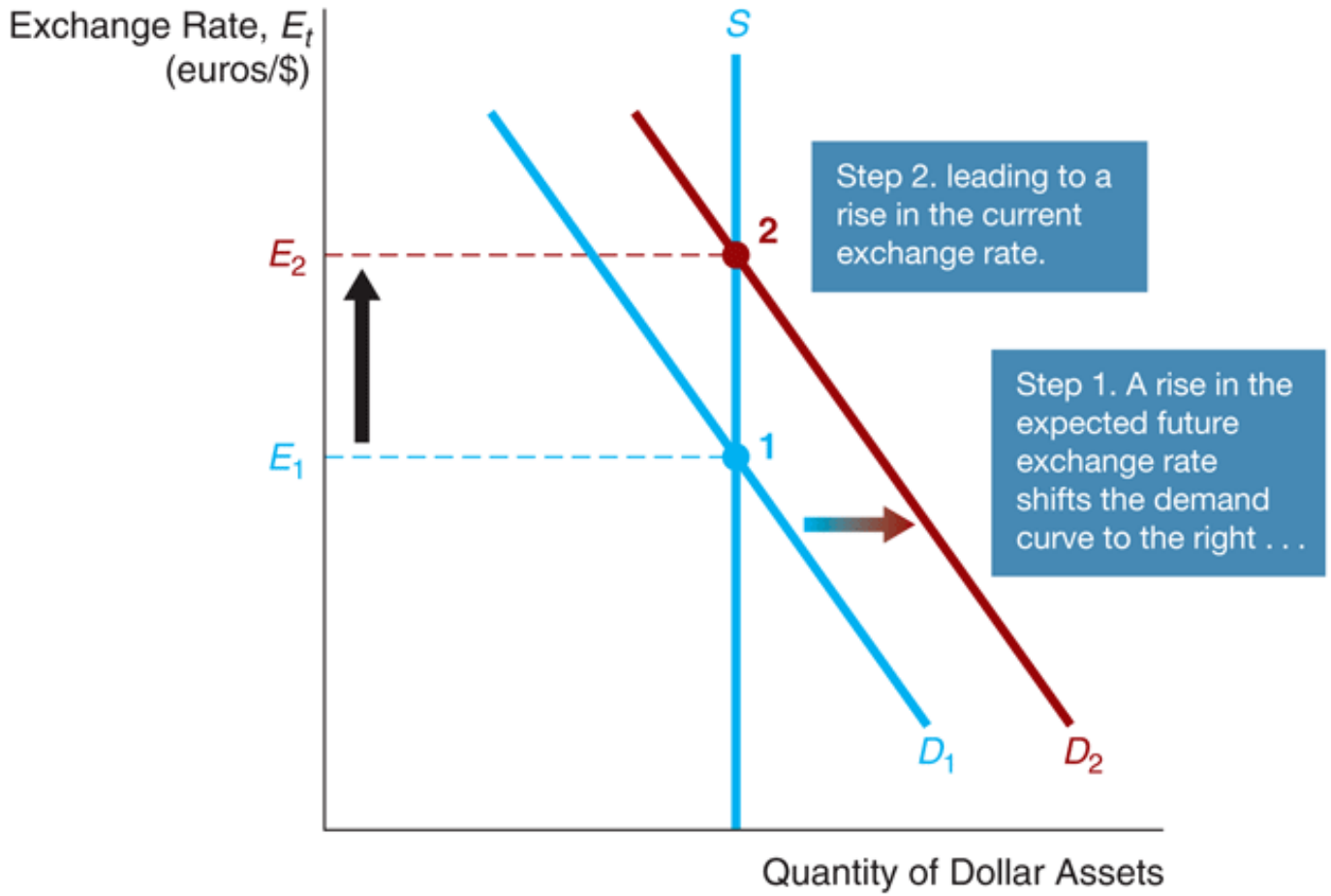
Exchange Rates Response to an Increase in the Domestic Interest Rate



Exchange Rates Response to an Increase in the Foreign Interest Rate

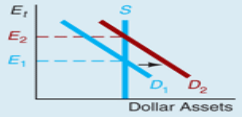
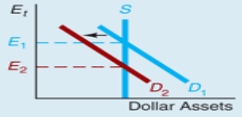
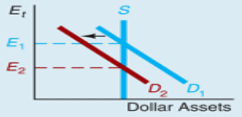
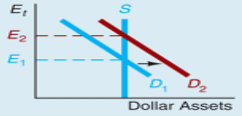
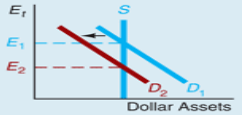
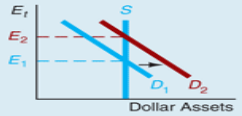
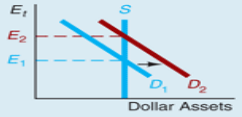


Exchange Rates Response to an Increase in the Expected Future Exchange Rate



Factors that Shift the Demand Curve of Domestic Assets

Factors That Shift the Demand Curve for Domestic Assets and Affect the Exchange Rate

Factor	Change in Factor	Change in Quantity Demanded of Domestic Assets at Each Exchange Rate	Response of Exchange Rate, E_t	
Domestic interest rate, i^D	↑	↑	↑	
Foreign interest rate, i^F	↑	↓	↓	
Expected domestic price level*	↑	↓	↓	
Expected trade barriers*	↑	↑	↑	
Expected import demand	↑	↓	↓	
Expected export demand	↑	↑	↑	
Expected productivity*	↑	↑	↑	

*Relative to other countries.

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Effects of Changes in Interest Rates on the Equilibrium Exchange Rate

Fisher Equation:

$$i = r + \pi^e$$

- Changes in Interest Rates
  - When domestic **real** interest rates raise, the domestic currency appreciates.
  - When domestic **nominal** interest rates rise due to an expected increase in inflation, the domestic currency depreciates.
- Changes in the Money Supply
  - A higher domestic money supply causes the domestic currency to depreciate.

Value of the Dollar and Interest Rates, 1973–2010